

# Exploring the Mechanism of the Impact of Government Subsidies on High Quality Innovation of Enterprises

Shengnan Chen

School of Finance and Public Management, Anhui University of Finance and Economics, China

## Abstract

**Government subsidies are a common policy tool to support enterprise innovation. This article reviews relevant research and explores the impact mechanism of government subsidies on high-quality innovation in enterprises. Research has shown that government subsidies can promote enterprises' research and development investment, enhance technological innovation capabilities, and reduce innovation risks through the intermediary role of financial investment, thereby promoting high-quality innovation for enterprises. However, government subsidies also face issues such as excessive dependence and resource waste, so it is necessary to strengthen effectiveness and supervision in policy design and implementation.**

## Keywords

**Government Subsidies; The Role of Financial Investment; High Quality Innovation of Enterprises; Impact Mechanism; Validity.**

## 1. Introduction

As an important innovation entity, improving the innovation level of enterprises is beneficial for supporting the high-quality development of regional or industrial economies, enhancing the vitality, innovation, and competitiveness of the economy, and has a positive impact on the entire market environment. It is conducive to comprehensively improving production levels, promoting the sustainable development of China's economy and the construction of a modern country. In addition, the increase in enterprise innovation investment is beneficial for improving the innovation level of enterprises, thereby improving productivity and production level, enhancing the comprehensive level and quality of enterprises, promoting the development and transformation of enterprises, and increasing benefits. Government subsidies can provide financial support to enterprises, alleviate the financing constraints faced by enterprises to a certain extent, make up for the innovation income of enterprises, reduce the impact of externality, reduce the sense of imbalance in the process of enterprise innovation, transmit the information of enterprise technology advantages and good project development to the outside, effectively reduce the risk of enterprise financialization, and increase enterprise innovation investment to a certain extent, Accelerate the process of enterprise innovation. However, the effectiveness of government subsidies has always been controversial. On the one hand, government subsidies can promote innovation activities of enterprises, thereby promoting their development. On the other hand, government subsidies also face problems such as excessive dependence and resource waste. Therefore, it is necessary to deeply explore the impact mechanism of government subsidies on high-quality innovation of enterprises, in order to better formulate policies and practices.

## 2. Research Background and Significance

### 2.1. Realistic Significance

Innovation is of great significance for China's economic and social development, as it can enhance China's overall competitiveness and overall national strength. As an important innovation entity, improving the innovation level of enterprises is beneficial for supporting the high-quality development of regional or industrial economies, enhancing the vitality, innovation, and competitiveness of the economy, and has a positive impact on the entire market environment. It is conducive to comprehensively improving production levels, promoting the sustainable development of China's economy and the construction of a modern country. Government subsidies can provide financial support to enterprises, alleviate the financing constraints faced by enterprises to a certain extent, make up for the innovation income of enterprises, reduce the impact of externality, reduce the sense of imbalance in the process of enterprise innovation, and effectively reduce the risk of enterprise financialization. This study introduces the concept of high-quality innovation to measure the quality and effectiveness of innovation activities, and explores the impact and mechanism of government subsidies on high-quality innovation output, which can provide a reference for the implementation of fiscal and tax policies by the government.

### 2.2. Theoretical Significance

The discussion and research in the economic community on whether the government should participate in and guide the development of the market economy has never stopped, and the boundaries of how the government can help enterprises develop are still unclear. From the perspective of innovation quality, this project evaluates the impact of financial subsidies on high-quality innovation of enterprises based on technology innovation theory, financing constraint theory, externality theory and other relevant economic theories, and enriches relevant research on the impact of financial subsidies on enterprise innovation. At the same time, it also provides a certain reference for the reasonable definition of government functions.

## 3. Literature Review

### 3.1. Domestic Literature

Domestic scholars' research on this topic mainly focuses on the following aspects: firstly, exploring the reasons for sustainable innovation of enterprises based on the influencing factors of innovation sustained investment and the impact on innovation investment fluctuations; Secondly, based on the three levels of enterprise scale, product market competition, and intellectual property protection, we will conduct a thorough examination of the internal and external scenarios in which government subsidies affect the innovation capabilities of enterprises.

Ju Xiaosheng et al. (2013) found that internal working capital of enterprises can play a role in smooth innovation and sustainable investment; Cui Yeguang (2020) proposed that fiscal subsidies have an "income effect", which involves injecting liquidity into enterprises, reducing their willingness to hold preventive financial assets, and inhibiting their financialization; Wang Qiuming et al. (2014) found that government subsidies have a crowding out effect on enterprise research and development investment; Guo Yingfeng (2020) pointed out that government subsidies will create a leverage effect on enterprise research and development investment; Shi Jianjun (2021) found a nonlinear relationship between government subsidies and corporate innovation performance. Government subsidies promote technological innovation to some extent, but excessive subsidies can have a counterproductive effect, with an inverted U-shaped relationship between the two.

### 3.2. Foreign Literature

Foreign scholars' research on this topic mainly focuses on the strength and necessity of government subsidies. Tassef (2005) believes that innovation is a public product, and its spillover characteristics will inevitably lead enterprises to face externality when they innovate, so government intervention is effective and necessary; Carboni (2011) found that government subsidies can effectively compensate for the additional losses caused by knowledge spillovers in enterprise innovation, and enhance the willingness of enterprises to carry out innovation activities; Bernstein (2020) found from the perspective of enterprise heterogeneity that compared to traditional enterprises, government subsidies tend to favor IPO enterprises, and their innovation vitality is also stronger; Mamunesas (2009) found that government subsidies can effectively reduce the cost and risk of enterprise innovation, alleviate financing pressure, and promote innovation.

However, some scholars also hold the opposite view, believing that government subsidies will inhibit enterprise innovation and have a crowding out effect. Lach (2002) pointed out that government subsidies tend to favor enterprise projects with high success rates of return, and therefore these projects are subject to interference from internal management and stakeholders. At this point, government subsidies will inhibit enterprise innovation.

### 3.3. Literature Review

It can be seen that due to differences in sample selection and research methods, the research and argumentation results of domestic and foreign scholars mainly focus on three aspects and have not yet reached a consistent conclusion: (1) government subsidies promote high-quality innovation in enterprises, which is the crowding in effect; (2) Government subsidies are not conducive to high-quality innovation by enterprises, which is known as crowding out effect; (3) Government subsidies promote enterprise innovation to a certain extent, while excessive subsidies can have an inhibitory effect, and their effect curve shows an inverted U-shape. At the same time, there is relatively little research on the specific impact mechanism, and the specific mechanism of action needs to be further explored. However, the rich and detailed literature also provides reference for this study.

## 4. The Impact of Government Subsidies on Enterprise Innovation

Government subsidies are an important financial policy tool that has a positive impact on promoting enterprise innovation. Its impact mainly includes stimulating enterprise innovation, promoting enterprise R&D investment, improving enterprise R&D efficiency, and promoting technology transformation.

(1) Government subsidies can stimulate innovation in enterprises. Government subsidies can provide necessary financial support for enterprises, reduce their innovation costs, and motivate them to increase their enthusiasm for innovation investment. At the same time, the government can also encourage enterprises to increase their enthusiasm for innovation investment by rewarding innovative achievements and other means. For example, subsidies provided by the National Natural Science Foundation of China to research-oriented enterprises can increase their R&D investment by about 20%.

(2) Government subsidies can promote enterprise research and development investment. Government subsidies can help enterprises alleviate financial pressure, increase R&D investment, and improve their R&D capabilities and levels. Government subsidies can also encourage enterprises to increase research and development investment through tax incentives and other means.

(3) Government subsidies can improve the efficiency of enterprise research and development. Government subsidies can help enterprises reduce research and development costs, improve

research and development efficiency and quality. The government can also improve the research and development capabilities and efficiency of enterprises through technology transfer, talent introduction, and other means.

(4) Government subsidies can promote technology transformation. Government subsidies can provide necessary funding and technical support for enterprises, promoting technology transformation and commercialization. The government can also encourage enterprises to engage in technological innovation and transformation through patent protection, intellectual property protection, and other safeguards. For example, the Chinese government provides subsidies to the field of new energy vehicles, encouraging enterprises to accelerate technological research and industrialization, and promoting the rapid development of the new energy vehicle industry.

(5) Government subsidies can help businesses share risks and encourage them to boldly engage in innovative activities. Enterprises face certain risks when conducting research and technological innovation, and government subsidies can reduce their risks, making them more willing to invest in the field of innovation.

(6) Government subsidies can promote industry development and structural optimization. The government provides financial support to certain strategic and emerging industries, encourages enterprises to innovate in these fields, promotes industry development and structural optimization, and improves the country's economic strength and competitiveness.

(7) Government subsidies can enhance the international competitiveness of enterprises. Government subsidies can reduce the research and innovation costs of enterprises, make them more competitive in the market, and better showcase their technological strength and brand image in the international market.

(8) Government subsidies can also promote cooperation and sharing among enterprises, promote the integration and optimization of innovation resources. The government can encourage cooperation and sharing among enterprises by establishing industrial alliances, technological innovation platforms, and other means to achieve resource sharing and complementary advantages. For example, the Chinese government supports "double innovation", which includes technological innovation and business model innovation, platform construction, encouraging win-win cooperation among enterprises, and promoting the development of the innovation ecosystem.

## **5. The Impact Mechanism of Government Subsidies on High-quality Innovation of Enterprises**

(1) Policy guidance is an important mechanism for the government to influence high-quality innovation in enterprises. The government provides various forms of subsidies, rewards, and preferential policies to enterprises by formulating relevant policy documents, encouraging them to increase innovation investment, improve innovation efficiency, and promote technology transformation. The government can also provide enterprises with a more high-quality innovation environment and conditions by introducing policies such as intellectual property protection and the transformation of scientific and technological achievements.

(2) Financial investment intermediaries are another important mechanism for the government to influence high-quality innovation in enterprises. The government provides various forms of financial investment support for enterprises by issuing government bonds, establishing special funds, and introducing social capital, reducing their financing costs, expanding financing channels, and further incentivizing enterprises to increase innovation investment. The government can also promote technological innovation and commercialization of enterprises by introducing venture capital, entrepreneurial investment, and other methods, and promote the transformation of innovative achievements into the market.

(3) The construction of a scientific and technological innovation system is an important mechanism for the government to influence high-quality innovation in enterprises. The government increases investment and construction in scientific and technological innovation, promotes the integration and coordination of scientific and technological resources, improves the cultivation and mobility of scientific and technological talents, builds an ecosystem and innovation platform for innovation and entrepreneurship, provides a more high-quality innovation environment and support for enterprises, and promotes their innovative development.

Overall, on the one hand, government subsidies can reduce innovation costs and risks for enterprises, and improve the efficiency and effectiveness of innovation activities. In innovation activities, enterprises often need to invest a large amount of funds, manpower, time and other resources in order to achieve corresponding innovation results. Government subsidies can provide necessary financial and technical support for enterprises, reduce the costs and risks of innovation activities, and increase their innovation enthusiasm and investment. In addition, government subsidies can also promote the sharing and utilization of innovation resources and improve the efficiency and effectiveness of innovation activities by encouraging enterprises to engage in collaborative innovation and cross industry innovation.

On the other hand, government subsidies can also guide enterprises to engage in high-quality innovation and promote the optimization and upgrading of industrial structure. Government subsidies should be combined with actual needs and development trends, strengthen support for new technologies, new formats, new models, and other fields, and provide enterprises with broader development space and higher level development platforms. At the same time, government subsidies should also strengthen the evaluation and supervision of enterprise innovation capabilities and technological levels, ensure the legality and standardization of enterprise innovation behavior, promote high-quality innovation activities, and promote the optimization and upgrading of industrial structure.

Finally, further optimization measures are needed to address the impact mechanism of government subsidies on high-quality innovation in enterprises. It should strengthen the formulation and implementation of policies, ensure the scientificity, fairness, and transparency of policies, and avoid discrimination and excessive concentration of policy support. In addition, government subsidies should be tailored to the actual situation and needs of enterprises, in order to improve the targeted and effective policies. At the same time, the government should focus on the long-term and stable nature of policies, providing sustainable innovation support and guarantees for enterprises.

In summary, the impact mechanism of the government on high-quality innovation of enterprises mainly includes policy guidance, financial investment intermediaries, and the construction of technology innovation systems. The government should provide enterprises with a higher quality innovation environment and support by formulating more targeted policies, improving the efficiency of financial investment intermediaries, and increasing investment in the technology innovation system, in order to promote the continuous realization of high-quality innovative development.

## 6. Policy Recommendations

Regarding the impact mechanism of government subsidies on high-quality innovation of enterprises, this article proposes the following policy recommendations:

(1) The government can increase funding, increase the amount and scope of subsidy funds, and encourage enterprises to carry out high-quality exploration activities. In addition, the government can adopt differentiated subsidies based on factors such as enterprise research

and development investment and technological level, to improve the targeted and effective nature of subsidy funds.

(2) The government can formulate sound technological innovation policies, promote policy innovation, strengthen policy coordination and integration, and achieve effective policy linkage and optimized resource allocation. Including measures such as formulating technical standards, establishing technological innovation funds, and protecting patent rights, promoting the technological upgrading and improvement of technological content of enterprises. In addition, the government can establish innovative resources such as innovation vouchers to provide more convenient and flexible technical support for enterprises.

(3) The government can optimize the service environment, improve service quality and efficiency, and provide more convenient services for enterprises. For example, the government can establish enterprise research and development support centers to provide technical consulting, training, expert evaluation, and other services to help enterprises improve their technological level and innovation capabilities.

(4) The government can promote cooperation and sharing among enterprises, encourage resource sharing and complementary advantages among enterprises. For example, the government can establish institutions such as industrial alliances and technological innovation platforms to provide cooperation and sharing platforms for enterprises, promoting the integration and optimization of high-quality exploration resources.

(5) The government can strengthen policy implementation supervision, establish sound policy implementation and supervision mechanisms, and ensure that policies can be effectively implemented. At the same time, the government should also timely summarize and evaluate the effectiveness of policy implementation, providing a basis for policy adjustment and optimization.

(6) Optimize the quantity and method of government subsidies to ensure the matching of innovation inputs and outputs.

(7) Establish an optimization mechanism for resource allocation and innovation direction, and provide resources and technical support that are in line with the company's development strategy.

(8) The government should strengthen investment in technological innovation and increase support for innovation and entrepreneurship. The government can further increase the establishment of innovation and entrepreneurship funds, encourage financial institutions to increase investment in the field of technological innovation, and promote the transformation of innovation achievements into the market. In addition, the government can increase its support for innovation in small and medium-sized enterprises, providing them with more flexible and convenient financing channels, and improving their innovation capabilities.

## 7. Conclusion

Innovation is an important means of promoting a country's economic development, and enterprises, as the main body of national economic development, play a very important role in the country's economic development. Government subsidies are an important means to promote high-quality innovation in enterprises, with significant policy significance and economic benefits. Government subsidies are an important policy tool for promoting high-quality innovation in enterprises. By promoting R&D investment, enhancing technological innovation capabilities, and reducing innovation risks, government subsidies can provide a stable innovation environment and resource guarantee for enterprises.

The government should optimize policy mechanisms, strengthen policy targeting and operability, and provide stronger support and guarantees for enterprise innovation. At the

same time, government subsidies also need to consider optimizing resource allocation and innovation direction, strengthening the effectiveness of policy implementation and supervision, and ensuring that policy implementation is in line with laws, regulations, and public interests. The government should also continuously promote the deep integration of technological innovation and industrial upgrading, promote the commercial application and industrial transformation of technological achievements, and achieve a positive interaction between technological innovation and economic development. In addition, government subsidies also need to strengthen the effectiveness of policy implementation and regulation. Inadequate policy implementation and inadequate supervision may lead to a discount in policy effectiveness and may also have some negative social effects. Therefore, the government should strengthen its efforts in policy implementation and supervision, ensure that policy implementation complies with laws, regulations, and public interests, and avoid policy abuse and misuse. In summary, government subsidies have important significance and impact on high-quality innovation of enterprises. The government should optimize policy mechanisms to ensure the driving effect of government subsidies on high-quality innovation.

## Acknowledgments

This project was funded by the Undergraduate Innovation and Entrepreneurship Training Program Anhui University of Finance and Economics (Project No.: 202210378278).

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